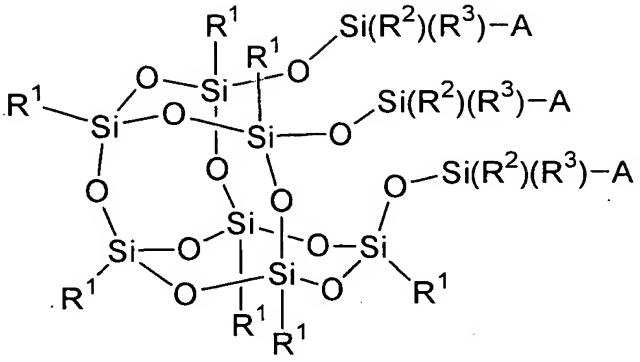
ABSTRACT

A large part of conventional organic-inorganic composite materials is obtained by mechanical blending silsesquioxanes with organic polymers, and therefore it has been very difficult to control the structure thereof as the molecular aggregate of the composite materials. An object of the present invention is to provide a novel silicon compound having a living radical polymerization-initiating ability for an addition-polymerizable monomer and a polymer obtained using the same to thereby solve the problem described above regarding the conventional organic-inorganic composite materials. The present inventors have found that a novel silsesquioxane derivative to which a group having an ability to initiate polymerization of a monomer is useful as means for solving the problem described above. That is, the silsesquioxane derivative of the present invention is represented by Formula (1):



(1)

wherein R^1 is hydrogen, alkyl, aryl or arylalkyl; R^2 and R^3 are alkyl, phenyl or cyclohexyl; and A is a group having an ability to initiate polymerization of a monomer.